



Developing a Standardised Pricing Tool for a Nordic Service Provider

Elviira Helminen

16 November 2017



Author Elviira Helminen	
Degree programme International Business – Finance and Accounting	
Report/thesis title Developing a Standardised Pricing Tool for a Nordic Service Provider	Number of pages and appendix pages 29
<p>The project is conducted together with a commissioning party that has shown interest in developing streamlined pricing practices within its Nordic-wide operations. Current trend in the company's industry shows that an operator able to serve multiple customers across the Nordics with standardised and competitive country specific pricing can gain prominent market share. The aim is to establish a pricing tool to serve the Firm's operations in Finland and, further, to be adopted to international processes.</p> <p>Pricing products and services usually tends to be the hardest task for companies to manage successfully, and practises in service sector vary quite a lot. However, the main theory behind them follows the same methods. The thesis covers the most common theories and steps taken when pricing services as a theoretical research, focusing on the most relevant practises. The research is mainly based on managerial accounting theories, covering appropriate approaches form marketing.</p> <p>A Service Pricing Tool is built completely relying on the theoretical research conducted in the thesis. As an Excel based tool, it uses the accounting equations from the research as the base for the calculations and provides industry specific factors to calculate segment specified pricing for the company's services.</p> <p>As a result, the tool can calculate the price of a service provided to variety of industries, as well as serves the company's goal to target multinational clients.</p>	
Keywords Job costing, cost allocation, pricing methods, pricing decisions, cost-plus pricing	

Table of contents

1	Introduction	1
1.1	Background.....	2
1.2	Project Objective and Project Tasks.....	3
1.3	Project Scope and International Aspect	5
1.4	Benefits.....	6
1.5	Risk Analysis	7
1.6	Key Concepts	8
1.7	The Case Company	9
2	Service Pricing	10
2.1	Job Costing.....	11
2.2	Cost Allocation	13
2.3	Support Department Cost Allocation	15
2.4	Pricing Decisions and Strategies.....	17
2.5	Cost-based Pricing.....	19
3	The Service Pricing Tool	21
3.1	Data and Cost Factors	21
3.2	The User Page.....	23
4	Conclusion	26
4.1	Results and Recommendations	26
4.2	Company Feedback.....	27
4.3	Professional Learning	28
	References	29

1 Introduction

The first chapter introduces the background and reason for the thesis, as well as presents the project objective and the various tasks necessary to conclude the project. The separate sections of this chapter go into detail of the background, benefits and need for the thesis.

After the introduction to the subject and the background of the project, the thesis discusses various aspects considered in the process more closely. It defines the project scope that sets the focus of the thesis and delimits anything unnecessary for the topic. Following, the thesis presents how it meets the international requirements set for it, as well as the benefits the project offers to its various stakeholders. The chapter then determines the most prominent risks that may arise during the project and introduces the six most important key concepts used in the thesis. Finally, the first chapter ends with a brief description of the commissioning company and the industry it operates in.

The thesis consists of three parts; theoretical research of the subject comparing different pricing methods, development of the tool and an end discussion. The subchapter 1.2 introduces the different tasks and the project structure in detail, with methods used during the research and development of the tool.

Following the initial introduction chapter, the thesis presents the theoretical framework for the product. It introduces most significant pricing method theories related to them focusing on models that best fit to the company's needs, and which are considered when building the pricing tool. The third part focuses on the tool itself, relating on the company perspective on what is required from the tool. The chapter discusses the functions and usage of the tool itself, as well as what should be considered if the tool is later adapted and modified to wider use within the Company's Nordic operations. Finally, the last chapter will conclude the results, feedback from the Commissioning Company and reflect on the author's personal learning.

Due to the sensitive nature of the topic the thesis does not go into too much detail of the chosen pricing method nor the functions of the tool but focuses on discussing the theories and factors affecting pricing decisions. All numbers used in the calculations are manipulated by using a multiplier to protect the company's anonymity and trade secrets.

1.1 Background

The commissioning company is a Nordic service provider, offering its services to business clients across the Nordics. Their industry has already secured a prominent share of the markets elsewhere, for example in North American, but it still has a lot of potential to grow in Finland.

To raise awareness around the industry, the different operators must create good associations in the minds of potential customers about the service. By attracting the right customers, a service operator in the same segment with the company can build its reputation and awareness around it. If a company has a good reputation, it attracts the right kind of employees, experts and specialists from a specific field, to work for them. This attracts bigger and better customers, which in turn helps the operator gain a bigger audience, and so on.

As in any market segment, the bigger operators of the segment are better known by the potential customers (and employees) and can create positive associations about themselves attracting clients to do business with them. Current trends in the industry have shown several mergers, and other changes in ownership between small and large operators.

Similar changes have taken place in the commissioning company during recent years. With this development in the company's structure the company is looking forward to joining forces with their new subsidiary. They are hoping to gain new customers across the Nordics, gaining bigger market share as a local service provider. The need for the thesis arose from these changes in the company structure that could allow them to attract new international customers and the subject was developed together with the company CEO and the Financial Manager. The company is also implementing a new ERP system in the near future and a tool providing consistent pricing for its services helps them to gain all the benefits the new program has to offer.

As for the company's share in the market area, it has already gained quite a wide customer base and awareness in Norway. However, even though the company has performed well in the market the recent development in this economy, highly affected by the decline in oil price, has affected all aspects of doing business in the country. The unemployment rate has been increasing slowly from its all-time-low in summer 2008 (TradingEconomics.com 2017) and the past couple of years have shown a historic high in unemployment in Norway. Although the sales of oil have started to pick up again, and the

indicators of Norwegian economy is showing some recovery, the effect to the market is slow and it takes time until the economy reaches the same level of stability as before.

The decline in the Norwegian markets and its effects to the company's business in the country is also one of the reasons behind this project. By developing the pricing tool that helps the company standardise pricing across the Nordics, they can gain bigger customers which will help build the company's Nordic-wide business.

1.2 Project Objective and Project Tasks

The Project Objective is to develop a pricing tool for a group operating in all the Nordic markets – excluding Iceland – to ensure consistency in pricing principles for a service. As the commissioning company is a large corporation operating across the Nordics, it is important for it to be consistent when offering same services in the different countries. Especially, when many businesses seeking the services also have Nordic wide operations they may be more inclined to find a service provider that can offer them a contract with country specific competitive pricing. To be able to do so the company must consider different variables that may vary between the countries, as well as find out the factors affecting the price that might be the same.

As the thesis is conducted as a product base project, it needs to follow the predesigned steps as follows:

- PT1. Researching all necessary theory needed when setting price to a service.
- PT2. Finding out how the company is currently pricing its services in the Nordic countries.
- PT3. Examining related organisational goals and preferences for the pricing tool.
- PT4. Developing the tool.
- PT5. Testing the tool in practise and fixing any potential problems.
- PT6. Presenting the tool to the commissioning company.
- PT7. Evaluating the project based on feedback from the company and discussing key findings.

Table 1 on the next page presents the theoretical framework, project management methods and outcomes for each project task following the order of the processes and the structure of the thesis.

Table 1 Overlay matrix

Project Task	Theoretical Framework	Project Management Methods	Outcomes
PT1. Researching necessary theory	Pricing methods, competitive advantage, cost-volume-profit analysis, break even	Desktop study.	An understanding of various pricing methods and the theory needed in conducting the project.
PT2. Finding out how services are currently priced	Pricing methods; cost-based, demand-based, competition-based, cost-plus pricing	Company process research, mapping and analysing, benchmarking, meetings with the company mgmt.	Having an insight of the current pricing method/practices used in the company over the Nordics, and why there is a need for the tool.
PT3. Examining related business objectives affecting the functions needed from the tool	Variable and fixed costs, gross profit, EBITA	Company process research, mapping and analysing, benchmarking, meetings with the company mgmt.	Getting a narrowed down description of what is needed from the tool, and specific factors the company wants that are considered when making decisions about pricing.
PT4. Developing the tool	Utilising PT1-PT3	Working on MS Excel.	The first version of the pricing tool.
PT5. Testing and fixing the tool	Utilising PT1-PT4	Working on MS Excel.	The finished pricing tool.
PT6. Presenting the tool	Utilising PT1-PT5	Working on MS PPT, Excel and Word	Feedback from the Company to be included in the project evaluation.
PT7. Evaluating the project	Analysing PT1-PT6	Reviewing how well the project has met the requirements.	Completed thesis.

The Figure 1 on the following page indicates how each of the project tasks are linked to each other, and how the previous task outcome always leads the project to the next task. As can be seen from the figure, the theses mainly relies on secondary data sources (text books and information received from the company). These types of data is used because the development of the tool is solely reliant on existing data. There is no need to develop or create any primary data since everything can be drawn from theory through a desktop study. Additional information is also provided by the company. This mainly includes the practical information about the their current pricing practices and targets it wants to

achieve with the new tool. As the aim is not to set new business goals for company, or to reflect how well it meets current targets, but to develop a tool that helps them to achieve the existing business objectives it currently has, collecting data for the Task 3 is crucial in order to meet the requirements set for the project.

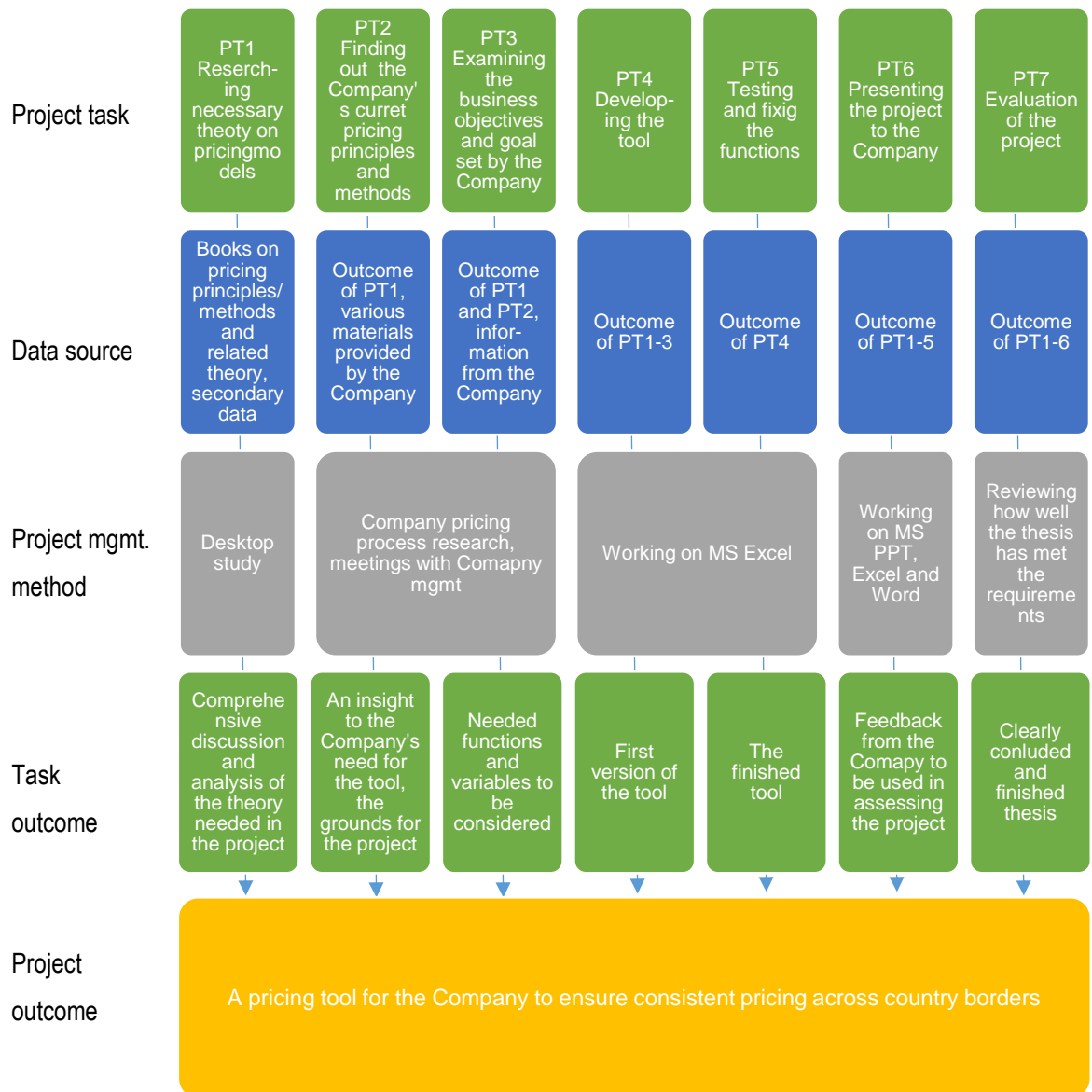


Figure 1. The Project Management Design

1.3 Project Scope and International Aspect

For the purpose of the thesis the focus is solely on the company's current pricing practices in Finland and their wish to standardise them. The result of this thesis is a pricing tool that is implemented only in Finland but what could easily be adapted across the Nordic

branches, as well. As the thesis focuses on developing the pricing tool, it does not discuss any theory considering the way of doing business in the Nordics.

When studying pricing, all unnecessary theories about price are left out to serve the thesis. It does not focus on any theory that defines how the law of demand and supply, and competition in the markets determine prices on a bigger scale, but mainly considers the concepts and factors that are used when calculating the actual price of a service. The focus is not in how the management makes decisions and manage costs, but which of these costs are considered when pricing a service.

As costs in production and administration highly affect the expenses of a business, the right price will ultimately define the business' ability to produce profit. Therefore, the thesis studies cost management as a part of the theoretical research. The thesis, however, leaves any decision making on reducing costs to the management of the commissioning company, as the aim is to produce a pricing tool, not to find a solution to decrease the expenses in the company.

Because the product is to be implemented in Finland, the initial costs and variables considered are taken from the company's Finnish financial statements, as well as what is set by Finnish standards (for example, legislation and taxation) when developing the tool. However, tool is designed in a way that it is easy to be modified to the needs of other Nordic markets.

The commissioning company is operating internationally, and the purpose of the thesis is to improve its competitiveness and create an opportunity to gain international clients. Because the thesis discusses the company as a whole, and tool is built so it can easily be modified to meet each country's requirements, the international requirement for the thesis is met.

1.4 Benefits

The thesis provides the company a tool to help them unify the pricing of their services across the country. The tool can make them more competitive in their respected business segment because the company is able to offer their customers consistently priced service regardless of the region. As the commissioning company aims to be one of the biggest Nordic players in their business segment, the ability to pursue large customers operating across the borders with a unified pricing strategy offers them a great market advantage.

The subject of the thesis discusses various principles of managerial accounting throughout. This develops the author's ability to utilise the knowledge gained through Haaga-Helia studies, and apply critical thinking when preparing the tool, which creates value to the author as a stakeholder. It also benefits the author's future studies and career as a business professional. An individually prepared project, such as this thesis, develops the author's professional skills and showcases their competences for the future.

1.5 Risk Analysis

One of the biggest issues faced during the process is timing. This is crucial since the company prefers to implement the tool during the current year to gain as much market advantage as possible from the changes in company structure mentioned in chapter 1.1. Their aim is to start the upcoming fiscal year using the tool together with the new ERP system. Additionally, lack of response and cooperation from the financial and sales departments could lead to further delays. While timing related matters can have a significant impact on the delivery of the thesis, the delaying of the thesis does not affect the Company's business. Nevertheless, the Company can possibly lose a small amount of short term leverage it currently has from the merger if the thesis is delayed. The best way to avoid risks caused by scheduling issues is to adapt to changes and find an alternative way to research the problem.

Secondly, regional difficulties may arise and pose a dilemma. Country-related issues regarding legislation, labour markets and other economic factors can affect the tool's ability to work in all the countries in a standardised manner. To avoid this, the tool is customised to focus on one country, specifically, Finland. The parts that are either lacking or faulty are tended to improve matters for the Finnish market.

At the same time, if the project attempts to serve each of the countries, it will be too wide. The focus would be lost and subsequently the end result would be separate tools for each country. The pressure of not meeting the requirements, or over doing it, can easily have a swaying effect. To sidestep this matter, this thesis focuses only on building the tool to serve the Finnish markets.

The risk in relying solely on secondary data is mainly to cover all the necessary aspects, so that the theory part does not end up being too narrow, as well as to leave out everything that is redundant so that the thesis subject is not too wide. Source criticism is also an element to consider when discussing the risks of the data collection phase. Making sure all the sources used in the project are reliable, and that the decisions are based on

the theory presented in the research part, will ensure consistency and validity of the project.

1.6 Key Concepts

Cost-Volume-Profit Analysis studies the effects of changes between costs and expenses, volume in production, sales, and net profit (Horngren, Sundem, Burgtähler, & Sachtzberg 2014, 63). Costs are probably the greatest factor affecting pricing decisions. Changes in costs of producing a product or a service ultimately determines how much a business is making profit. If the costs exceed the sales, prices must be increased, or expenses have to be decreased.

Break-Even Point (BEP) can be presented with a simple equation as follows:

$$\text{sales} - \text{variable expenses} - \text{fixed expenses} = \text{net profit}$$

It is the level where a business' expenses are equal to sales, and where net income is zero. Before exceeding break-even point, a business is not making any profit. Analysing and recognising the BEP helps managers make pricing decisions to reach the desired profit. (Horngren et al. 2014, 64-65.)

Contribution Approach, when making pricing decisions, is an internal reporting method that distinguishes the variable expenses from the fixed expenses. Variable expenses change according to the changes in sales, and fixed expenses stay the same despite the changes in sales volume. (Horngren et al. 2014, 203.)

Job-Costing relates to calculating the costs of producing individual or distinguishable goods or services, referred as "jobs". It uses variable costs accrued and adds allocated fixed costs from a firm's operations to the unit of a job to define the total costs of the job. Job-costing is often used by service providers as the basis of invoicing a client. (Braun & Tietz 2013, 122.)

Cost-Plus Pricing is a popular method used for setting prices. Price is calculated by adding a desired mark-up to the job costs of a product or a service (Horngren et al. 2014, 213). The mark-up can be determined by multiplying costs by a desired operating margin or contribution margin ratio, depending if fixed costs are considered when determining the price.

Cost Allocation considers indirect costs assigned to different cost objects used in producing a product. Cost allocation is important in pricing since it acknowledges all administrative costs that cannot be directly traced to a specific cost object, but which significantly affect a company's net profit. Cost allocation is not necessarily considered in all managerial decision making since it may lead to misinterpretation – however, this can happen in either way. (Horngren et al. 2014, 144-145.)

1.7 The Case Company

The case company is a Nordic service provider in a competitive and quickly growing service segment. Due to the competitiveness of the market and sensitivity of any financial information presented in the project, the company wishes to stay anonymous and will be referred to as the (case/commissioning) company throughout the thesis.

The company operates in the Nordic countries, excluding Iceland, and is listed in one of the countries' stock exchange. In the Nordic-wide market the commissioning company is one of the biggest in its segment, and in the Finnish market it is one of the top 20 service providers in its segment. Similar services are widely used in bigger market areas around the world, but they are yet to gain awareness and market share in Finland.

Although the industry itself is still somewhat unfamiliar in Finland, some businesses operating in certain segments are known for using extensively similar services as provided by the company. The industries known for implementing this service more extensively are mostly related to the hotel, restaurant and catering (HoReCa), and construction industries, but the options to implement the service in other segments are endless. The biggest problem in the Finnish market seems to be that the segment is still quite unfamiliar for customers, and the benefits that could be gained from the service are not well understood.

2 Service Pricing

This chapter presents the theoretical framework for the thesis. The following Figure 2 presents the three main concepts studied in the initial research – *job costing*, *cost allocation* and *pricing strategies* – which all include relevant approaches for making pricing decisions. The focus of the theoretical research in each concept is on the overlapping theoretical aspects to serve the purpose of the thesis.

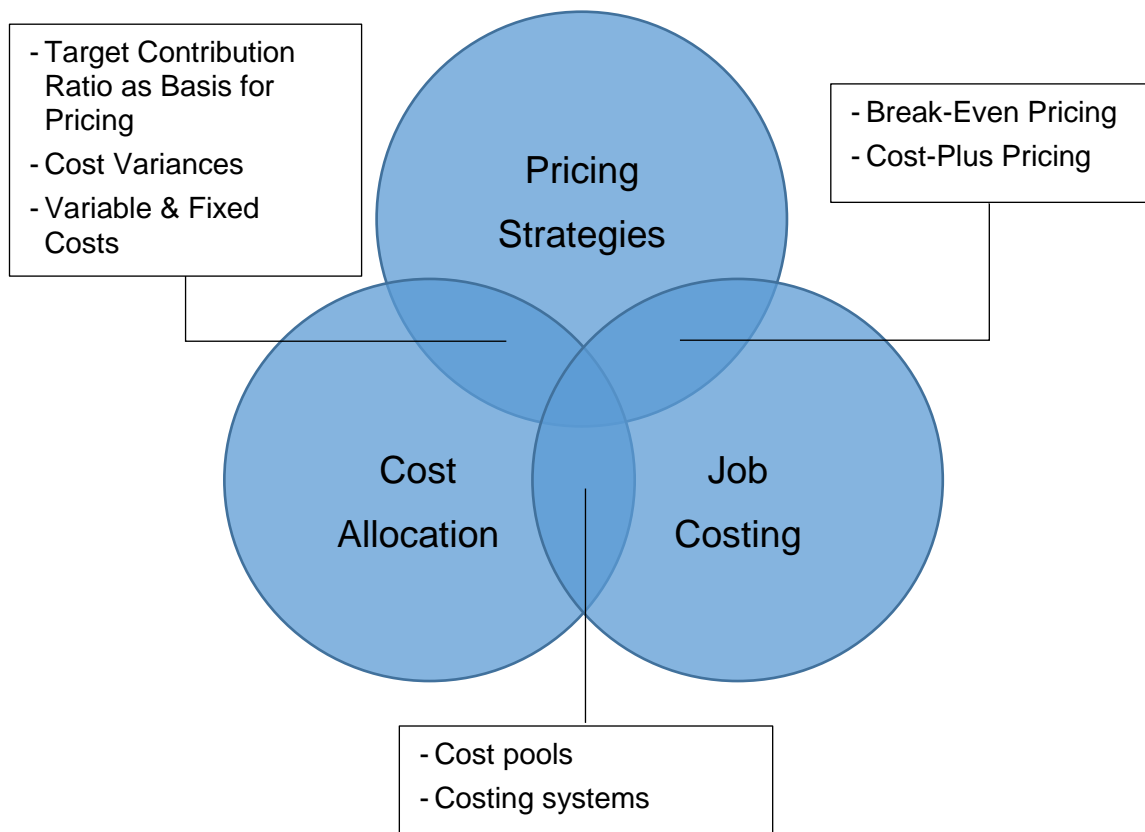


Figure 2. The theoretical framework for research on pricing decisions

By studying various aspects relating to cost-volume-profit analysis the thesis aims to find the correct pricing method for the Company that focuses on the right variables affecting pricing. The changes in expenses are not considered more closely, but the thesis aims to adapt cost allocation to pricing decisions. By determining the total costs, cost allocation, and any factors that may cause changes to the cost of producing the service, helps to take all the needed variables into account when developing the tool. (Horngren et al. 2014, 64-65.)

As aforementioned, costs are one of the most determining factor when setting price, therefore the research should discover where the costs accumulate and how they are allocated to producing a service. Making a distinction between various kinds of expenses will

guide the decision making when choosing the right pricing method for the company (Horn-gren et al. 2014, 203). Also, calculating the break-even point and analysing any variables affecting it will help determine the price needed to achieve a desired profit margin for the company (Horngren et al. 2014, 63).

2.1 Job Costing

Determining the right price for a service can often turn out to be difficult. In the service sector, to help management to determine the right prices for their services, they normally use job-costing to calculate the overall costs of producing the service. By using job-costing managers are then able to conclude the right price by adding a desired mark-up for the service to attain targeted profits.

Job-costing is used to assign all *direct* and *indirect costs* of producing a good or a service to a cost object called a *job*. Direct costs can be easily traced to each specific job because they are directly caused from producing it. Indirect costs, however, are more difficult to be traced to a distinct job, and to assign these costs to the cost object, managers use *cost allocation*. The following figure 3 illustrates the process of *cost assignment*. (Datar & Rajan 2018, 128-129.)

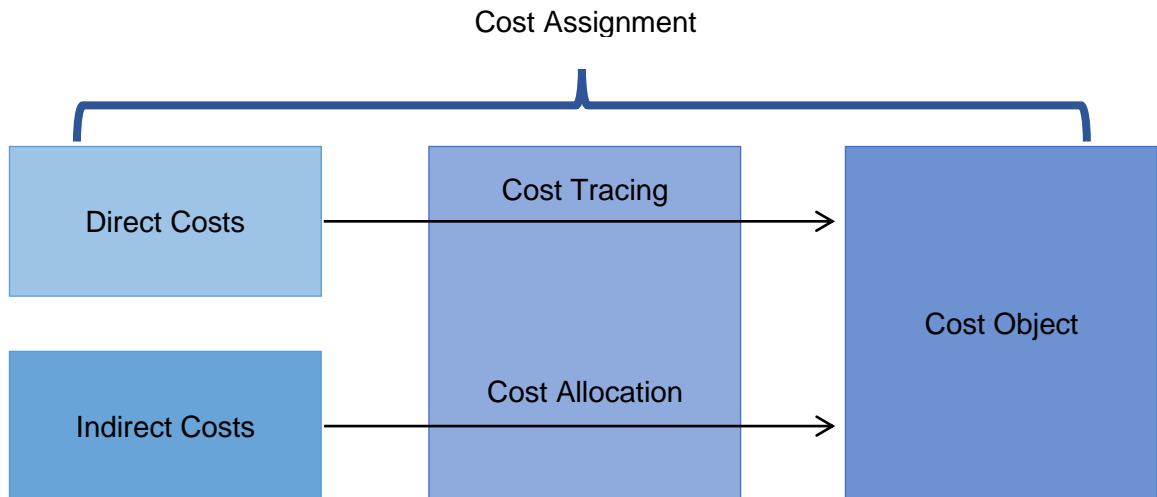


Figure 3 Assigning direct and indirect costs to a cost object (Datar & Rajan 2018, 128)

In service sector, the job is each distinct service or multiple units of the same service produced. These can for example be legal consultation provided by a solicitor or an out-sourced recruitment service provided by an HR company. Direct costs to produce these services are the actual professional hours logged to perform the commissioned job which are easily traced to it. Indirect costs accumulate from all the expenses the business has

from its operations, that are necessary for it to do business, but cannot be traced to a specific job. These expenses include administration costs, rent for facilities, utility expenses and license fees. Managers group these costs together into *cost pools* to ease the allocation of all these costs, so they don't have to be assigned individually to the cost object. (Bhimani, Horngren, Datar & Rajan 2012, 63; Datar & Rajan 2018, 128-129.)

The general approach to job costing can be separated into six simple steps (Bhimani et al. 2012, 63-64):

1. Identify the cost object
2. Identify the direct costs
3. Identify the cost pool(s) for indirect costs
4. Select the cost-allocation base for indirect costs
5. Determine the cost-allocation rate for indirect costs
6. Add all direct costs and allocated indirect costs, i.e. assign the costs to the cost object

As an example, a simple model of job costing for a recruitment process can be easily illustrated by following these steps:

1. At first, the cost object has to be identified. In this example the cost object is the commissioned recruitment process conducted by an HR company.
2. Direct costs to the recruitment process can be identified as the direct labour hours of an HR consultant conducting the recruitment from start to finish. The consultant logs all their working hours used to design the job advertisement, selecting and interviewing the most potential candidates, and presenting them to the client. For example, if the average hour wage of a consultant in the company is 20 €, and the time used to a specific job is 10 hours, then the direct costs of the recruitment is 200€ (20€ x 10h).
3. Indirect costs of the recruitment commission include a diversity of costs – administrative labour costs (215 000€) and other operation costs (146 900€) – accumulating during a business period. The first consists of all the administrative processes in the company, payroll, and assisting work, and the latter includes, for example, rents, license fees, utilities and cleaning services. Together these costs form a cost pool for the job totalling 361 900€.
4. In the example, the chosen cost-allocation base is the total of consultant labour hour in a business period. In the HR agency the total consultant hours in a year is 22 590.
5. The indirect-cost rate can be calculated by dividing the total of indirect-cost pool by the determined cost-allocation base:

$$\begin{aligned}
 \text{indirect-cost rate} &= \frac{\text{indirect-cost pool}}{\text{cost-allocation base}} \\
 &= \frac{361\,000,00\text{ €}}{22\,590} \\
 &= 16,02\text{ €}
 \end{aligned}$$

By this calculation the actual indirect-cost rate for the recruitment is 16.02€ to each consultant hour used on the job, and the indirect costs allocated to the job total 160.20€ ($16.20\text{€} \times 10\text{h}$).

6. The costs are assigned to the cost object by adding the total cost of consultant hours (200€) and the total of indirect costs (160.20€), and the result is the total cost of the job, which is 360.20€.

2.2 Cost Allocation

As mentioned in the earlier chapter, indirect costs are those that cannot be easily traced to the cost object. Allocating all indirect costs of a company to a particular cost object is not always necessary, nor it automatically make sense to do so, to serve all purposes of management's decision making. Depending of the purpose, the management can choose which costs of the company to include in cost allocation for each cost object. In pricing decisions, however, all possible costs should be considered. The correct pricing of the company's products is the only means to generate desired profits and creates the conditions to cover the costs within the company. (Bhimani et al. 2012, 135-137.)

The indirect costs are gathered into cost pools that are then allocated to the cost object using a selected cost allocation base. Managers group specific costs into the cost pool based on similarity. Cost pool consisting of similar costs, such as supporting departments' costs (for example, personnel department and legal department costs), are called *homogenous cost pools*. Homogeneity of a cost pool helps acquire more accurate costing for jobs. The benefit of using homogenous cost pools is that including similar costs in one pool results in the same cost allocation rate as allocating each of those costs individually. (Bhimani et al. 2012, 139.)

Using multiple cost pools also develop more accurate results in costing. Each of these are then allocated by using the most appropriate cost-allocation base for each pool by determining what is the desired effect measured. Figure 4 illustrates how different department costs are allocated throughout the company structure eventually to a specific cost object in a figurative construction company A. It should also be noted from the figure how each cost item can simultaneously be a direct cost to one, and an indirect cost for another cost object. (Bhimani et al. 2012, 137.)

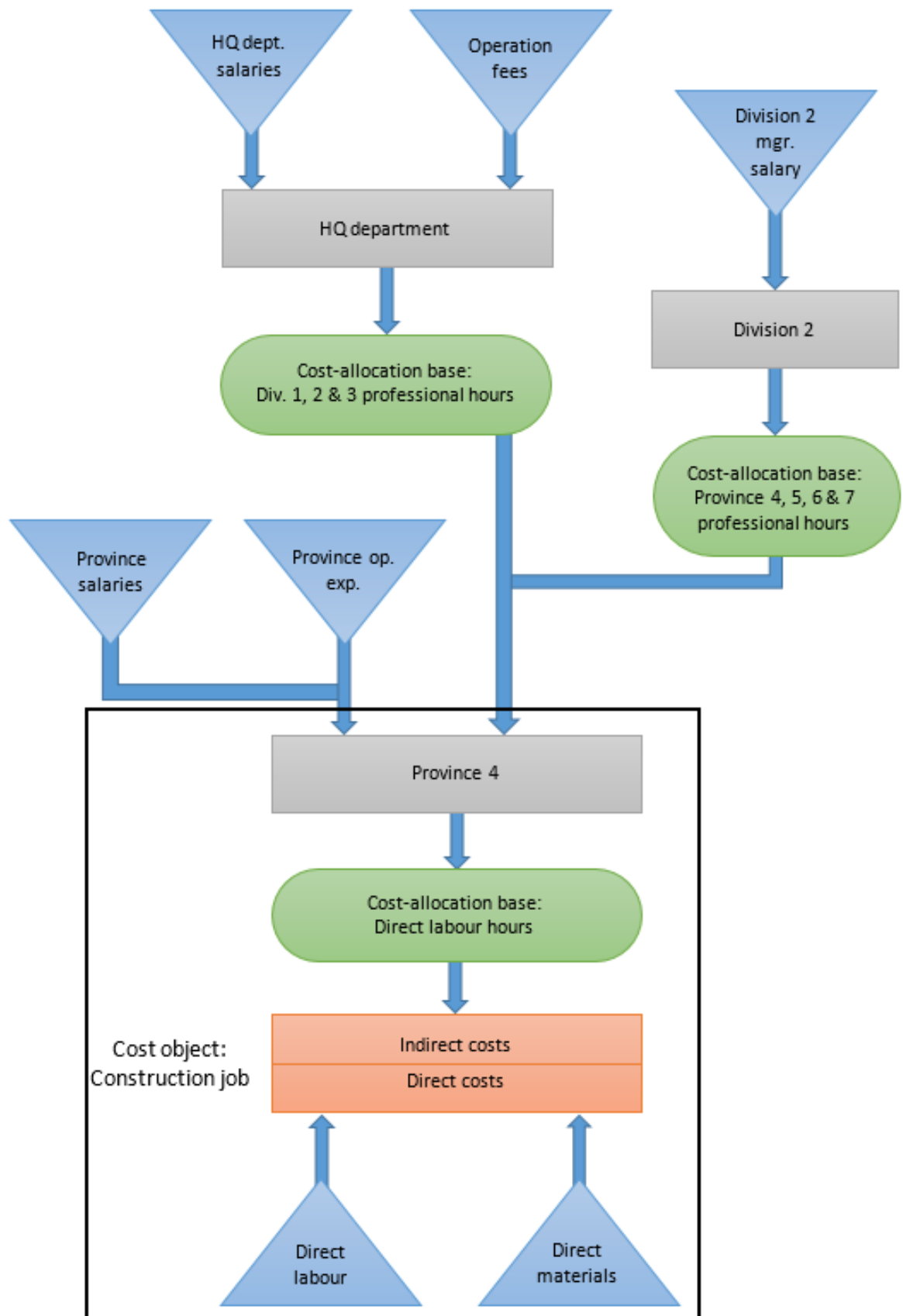


Figure 4 Cost tracing and cost allocation of construction company A

2.3 Support Department Cost Allocation

Deciding how to allocate the support department costs differs between each business entity, and no two organisations are directly comparable in their support cost allocation. Organisations prefer different methods of cost allocation for the support department costs. For example, they may decide to trace all direct support costs to each operational department and to allocate only the indirect support costs. There are three methods that managers use for allocating supporting department (payroll, legal, corporate headquarters...) costs; *direct*, *step-down*, and *reciprocal allocation method*. (Bhimani et al. 2012, 143-150.)

The direct allocation method assigns all supporting departments' costs directly to the operating departments without considering the amount of which the support departments use each other's services. In the step-down method the support departments must be arranged into the order in which the allocation is to be done. The ranking of support departments can be based on the total amount of the services used by the other department in percentages, or the total cost of the service provided in euros. In this method, no costs are allocated back to the first department. Unlike the step-down method, the reciprocal method first considers the amount of all support departments' usage of each other, and then allocates the full costs of each support department to the operating departments. (Bhimani et al. 2012, 144-148.)

For the purpose of developing the tool, the thesis only discusses the direct allocation method as it is the most suitable for the case company's use. For one, most of the company's support departments use very little, if at all, each other's resources. Thus, it is better to allocate all their costs directly to the operating departments. And two, it plays little relevance for the management's decision making to allocate the support departments costs in more detail. The case company's cost allocation follows closely the structure of the construction company A's cost allocation illustrated in Figure 4. For this reason, it serves as an example to demonstrate the direct allocation method of support department costs. All the figures used in the examples are for illustrative purposes only and they do not reflect the financial position of the actual case company in any way.

For example, consider the HQ department and the division 2 in figure 4 as the support departments to be allocated to the province 4. The HQ department costs are also allocated to all the other provinces from 1 to 7, and the division 2 costs are allocated to provinces 4 to 7. The allocation is based on a budgeted estimate on how much of their resources each of the provinces use. The following table 2 presents the full support department cost allocation of the company A.

Table 2 Direct cost allocation of construction company A

	Support Departments			Operating Departments							Total
	HQ department	Division 1	Division 2	Province 1	Province 2	Province 3	Province 4	Province 5	Province 6	Province 7	
Number of employees	5	2	2	2	2	3	5	2	3	1	27
Budgeted overhead costs before allocation	1 500 000 €	150 000 €	120 000 €	150 000 €	80 000 €	120 000 €	250 000 €	75 000 €	160 000 €	50 000 €	2 655 000 €
Budgeted support work (%)											
By HQ department		9 %	9 %	9 %	9 %	14 %	23 %	9 %	14 %	5 %	100 %
By Division 1				29 %	29 %	43 %					100 %
By Division 2							45 %	18 %	27 %	9 %	100 %
Direct allocation											
Budgeted support work (%)											
By HQ department				11 %	11 %	17 %	28 %	11 %	17 %	6 %	100 %
By Division 1				29 %	29 %	43 %					100 %
By Division 2							45 %	18 %	27 %	9 %	100 %
Budgeted overhead costs before allocation	1 500 000 €	150 000 €	120 000 €	150 000 €	80 000 €	120 000 €	250 000 €	75 000 €	160 000 €	50 000 €	2 655 000 €
Allocated costs of											
HQ department	-1 500 000 €			166 667 €	166 667 €	250 000 €	416 667 €	166 667 €	250 000 €	83 333 €	
	0 €										
Division 1		-150 000 €		42 857 €	42 857 €	64 286 €					
		0 €									
Division 2			-120 000 €				54 545 €	21 818 €	32 727 €	10 909 €	
			0 €								
Total budgeted overhead costs				359 524 €	289 524 €	434 286 €	721 212 €	263 485 €	442 727 €	144 242 €	2 655 000 €

Note that the direct method ignores all the support work provided by the HQ department to the other support departments and allocates its costs only to the operating departments. Instead of allocating 9 % of HQ department costs to division 1 and 2, as presented in the top section of table 2, the direct method only acknowledges the support work provided to provinces 1-7 and divides the HQ costs between them according to the share of which each province uses the support of the department.

In the example the costs are allocated based on the number of employees in each province, assuming each employee requires an equal amount of support from the HQ department and applicable division. Therefore, the HQ costs allocated to provinces 4-7 equal to 28, 11, 17 and 6 % instead of the 23, 9, 14 and 5 % shown in the topmost section of table 2. Figure 5 bellow illustrates this further presenting only the cost allocation of the HQ department and the division 2 costs.

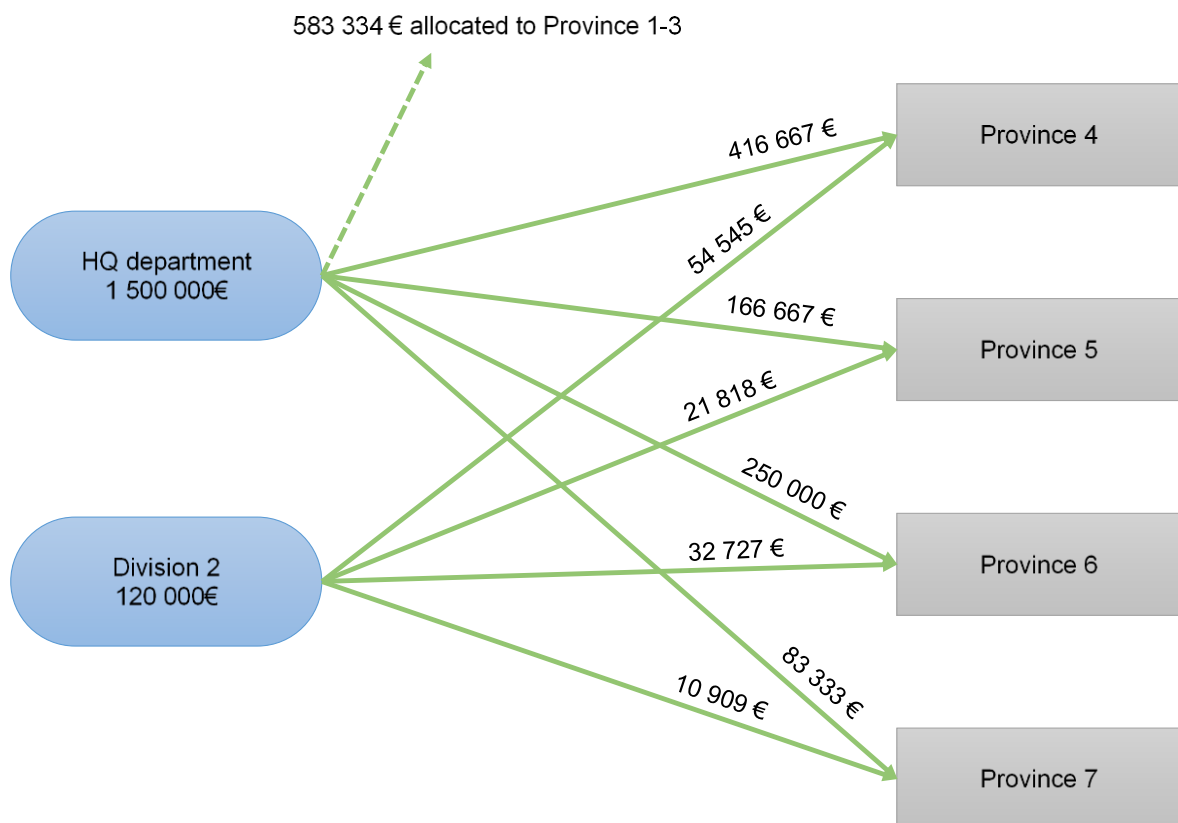


Figure 5 Support department cost allocation with the direct method in construction company A

2.4 Pricing Decisions and Strategies

Pricing is profoundly one of the most essential elements of a company's marketing strategy. As Armstrong and Kotler (2015, 295) state, it "*is the only element in the marketing*

mix that produces revenue; all other elements represent costs", and that they ultimately "have a direct impact on a firm's bottom line". Who should decide the pricing strategy or the eventual price for a company's product or service varies between firms depending on the size of the company. Prices may be set by the top executives, marketing department and salespeople, or even a special pricing department. However, it is the top executives' responsibility to set policies and targets for pricing, from where the sales department can have some leeway and conclude optimal prices offered to clients. (Armstrong & Kotler 2015, 304.)

Liozu (2015, 72-76) presents four price-management structures – *decentralised, centre-supported, centre-led, and centralised pricing* – which all assign the responsibility of pricing decisions to various levels of an organisation to either create regional or uniformed pricing. From these four price-management structures, the centre-led pricing reflects essentially the case company's present price-management structure. It offers pricing guidelines and targets from the management, leaving the actual decision making to the regional sales personnel. The centre-led pricing provides companies streamlined and improved pricing practises, and this ultimately is also the purpose in creating the pricing tool in this thesis. (Liozu, 2015, 74-75.)

Pricing decisions tend to cause the biggest headache to the decision makers in a company, and they often tend to rather focus on other elements in their marketing strategies than pricing itself. Deciding how to price their product or service requires extensive market research, competitor analysis, and costumer sensitivity analysis. There are three main pricing strategies that each consider a specific element affecting pricing decisions; *customer value-based pricing, competition based pricing, and cost-based pricing*. The latter will be deliberated more closely in a separate chapter. (Armstrong & Kotler 2015, 294-302.)

The angle to customer value-based pricing is how well customers' review a product or service creates them value. That is, how much the customers' value the offered service and how much they are willing to pay for it. Ultimately, the price ceiling is set when customers regard the product is priced higher than it is of value to them, meaning that there is no demand if the price is set higher. Value-based pricing is highly subjective to the taste and preferences of consumers and aims to create additional value to the product or services to meet the customer perception of value. (Armstrong & Kotler 2015, 295-296; Liozu 2015, 20.)

Competition-based pricing considers competitors and their strategies comparing competitors' pricing and offerings. It sets companies' the opening to offer customer's more value for the same price as their competitors. Companies can differentiate themselves from competitors if customers feel they can offer them greater value, and therefore charge higher prices. Also, if a company is operating in very competitive markets where there are many players, they might consider charging smaller prices to attract more customers. And vice versa, if there is little to no competition, the large players principally determine the prices. (Armstrong & Kotler 2015, 301-302.)

2.5 Cost-based Pricing

Cost-based pricing is the most widely used pricing strategy. It considers the costs of producing a product or a service and adds a targeted rate of return on it to set the price (Armstrong & Kotler 2015, 295). Managing its costs, a company can generate higher profits compared to its competitors, provided it is able to produce a similar product or service with lower costs. Determining the price that covers the overall costs of production substantially sets the price floor for a product or a service and the company won't produce any profit if the price is set any lower. The simplest approach to cost-based pricing is *cost-plus pricing* where a standard mark-up is added to the total costs of production. However, this ignores customer demand and competitor pricing, and most likely won't lead to the best results. Other generally used cost-based approaches are *break-even pricing* and *target return pricing*. (Armstrong & Kotler 2015, 300-301; Liozu 2015, 19-20.)

Unlike cost-plus pricing, the break-even pricing and the target return pricing methods aim to determine the price at where the company will break even. They both use the *break-even analysis* to indicate the different costs and revenues at a given price and varying sales volumes. Through break-even analysis companies can then establish the needed sales volume at a given price to attain targeted profits or set prices to break even the costs with the returns at different sales levels. The figure 6 demonstrates how the break-even point changes at different volumes of sales when the price is set at various levels. (Armstrong & Kotler 2015, 300-301.)

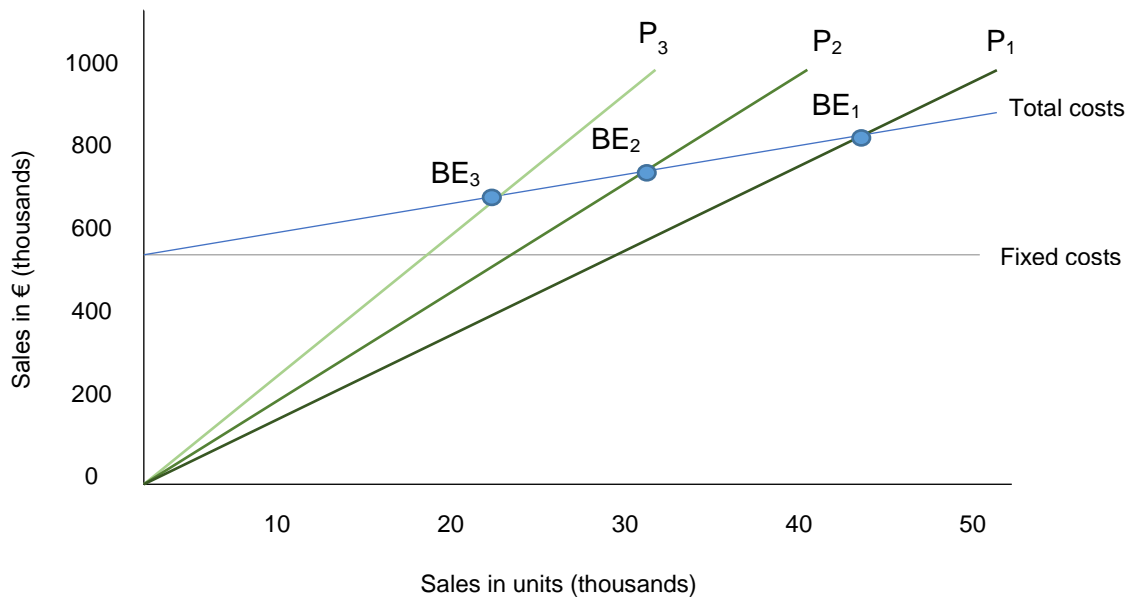


Figure 6 A firm's break-even volume at varying price levels (P_1 - P_3)

Even as all the cost-based pricing systems are the most commonly used pricing methods, they lack in considering the market fluctuation and changes in demand as they rely largely on budgeted costs and estimated sales levels. If the only basis for pricing is the targeted rate of return, and the demand is lower than anticipated, the only way to achieve targeted revenue is to raise prices. This, in turn, can lead to even lower level of demand and is contrary to the initial goal. (Morris, Pitt & Honeycutt 2001, 320-321.)

Doolan (2015, 28-30) emphasises that cost-plus pricing has been the most commonly used method for pricing services for so long that it is not likely to be replaced. He underlines that though the costs of producing a service is an important base for pricing, it should include a variation of methods that also include client-driven and competition-based deliberation. However, the service pricing tool, described in detail in the following Chapter 3, uses cost-plus pricing and target return pricing as its main principle, as its purpose is to offer the sales personnel guidelines for pricing, and develop consistent pricing practises within the case company.

3 The Service Pricing Tool

In this part, all the information gathered through the indebt research of the related theory in the previous chapter, as well as in several meetings with the Sales and Finance Managers of the case company, is incorporated together to create the tool. Through continuous testing and refining of the functions, the tool is perfected to meet the needs of the company. Throughout development it is kept in mind that the variables must be easily altered to match possible industry specific needs in the future, as well as serve the purpose it was originally intended – to create streamlined pricing practices within the company.

The purpose of developing the tool is to help the sales department, providing them a frame when negotiating optimal prices for varying clients. By testing and modifying variables the tool ultimately calculates the price at a targeted rate of return, from which the salespeople can negotiate the desired price for each prospective client.

Before developing the tool, the author examined the existing pricing tools the company had, and discovered several shortcomings in them, as they were not necessarily build specifically for the company. For this reason, the previously used tools did not examine some factors unique to the firm at all and lacked especially an industry specific consideration completely. Covering all the desired functions for the tool and cost factors affecting pricing created a framework for the tool, which was then built to match the needs of the company.

3.1 Data and Cost Factors

Before it is possible to calculate the cost of the service, and thus the price, it is crucial to get familiarised with the case company's cost structure, as well as any industry specific variables that may occur. Therefore, the first stage of building the tool is to gather all the relevant data from where the calculations can be done.

At first, all the costs of the company must be allocated to the operational departments. This is done in a very similar way as presented in chapter 2.3. The tool has a separate table for all the case company's departments that allocates the support costs in accordance to their cost structure. This table relies on budgeted costs that should be modified annually for the calculations to stay up to date. In the tool the cells that should be amended are indicated in light blue, orange and purple colours as seen in figure 7. All the other cells have formulas that allocate the costs appropriately to the operational departments.

FILL IN	The budgeted professional work in work years
FILL IN	The budgeted professional labour costs
FILL IN	All other budgeted costs
LOCKED	All cells in white have formulas and are locked

	Support Departments			
	HQ department	Dist mgmt 1	Dist mgmt 2	Dist mgmt 3
Professional labour as work year	7.0908	1.1818	1.1818	1.1818
Budgeted labour costs	392,357.60 €	99,034.84 €	78,589.70 €	75,989.74 €
Other budgeted costs	767,579.10 €	21,745.12 €	31,908.60 €	23,990.54 €
Budgeted overhead costs before allocation	1,159,937 €	120,780 €	110,498 €	99,980 €
Allocated costs of HQ department	-1,159,937 €			
	0 €			
By Dist mgmt 1		-120,780 €		
		0 €		
By Dist mgmt 2			-110,498 €	
			0 €	
By Dist mgmt 3				-99,980 €
				0 €
Support 2				
Support 3				

Figure 7 Cost allocation table of the commissioning company

In addition to the cost allocation, the tool draws attention to regional job costing. It gathers the budgeted regional costs, and allocated support department costs to a table that automatically calculates the cost of professional work, budgeted overheads, and allocated overheads to each region. The table follows the same colouring scheme as in the figure 7 so the user can see without difficulty which ones are the correlating variables from the allocation table. In the job costing table there is two columns that need updating annually. These are marked with brown and green colour in the following figure 8.

Region	Number of Professional work years	Budgeted Professional Labour Costs	Budgeted Professional Hours	Cost of Professional Hours	Budgeted Overheads	Cost of Overheads	Budgeted Allocated Overheads	Cost of Allocated Overheads	Operational Working Hours	Target Margin
National	33.6813	1773999.98	36106.3536	49.13	1535788	1.69			907131	9%
Province 1	8.2726	351349.14	8868.2272	39.62	200079	0.52	440503	1.15	383507	8%
Province 2	2.65905	148256.81	2850.5016	52.01	68741	0.58	192318	1.63	117715	5%
Province 3	1.1818	55308.24	1266.8896	43.66	74828	1.47	82779	1.62	51043	5%
Province 4	2.65905	121843.58	2850.5016	42.74	86114	1.53	193041	3.42	56450	6%
Province 5	1.47725	62280.86	1583.612	39.33	104333	1.11	91992	0.98	93976	6%
Province 6	1.47725	85857.77	1583.612	54.22	36439	0.51	95537	1.33	71963	5%
Province 7	1.7727	102698.42	1900.3344	54.04	32539	0.72	115566	2.56	45121	6%
Province 8	1.1818	62044.5	1266.8896	48.97	30293	0.18	76870	0.45	170834	8%

FILL IN	The budgeted operational hours
FILL IN	The budgeted target margin for the region

Figure 8 Job costing for the service provided by the company

For the tool to calculate industry specific prices, variables affecting costing is gathered from industry principles, procedures and other information, and are then categorised into a table. The tool, then derives the indicators corresponding to the chosen industry to the calculations on user page of the workbook, which is described in the following chapter. These industry cost factors are illustrated bellow (table 3). Since they are very definite to their industry and searched from the regulations precise to the field of the business, the sources are therefore not disclosed.

Table 3 Industry specific cost factors

Industry	Cost Factor 1	Cost Factor 2	Cost Factor 3	Cost Factor 4	Cost Factor 5	Cost Factor 6
Industry 1	40.53	11.91%	17.86%	4.29%	3.44%	0.00%
Industry 2	40.53	11.91%	17.86%	4.29%	3.98%	0.00%
Industry 3	43.23	15.13%	19.99%	4.54%	3.10%	8.32%
Industry 4	43.23	12.60%	18.90%	4.54%	4.76%	6.81%
Industry 5	43.23	12.60%	18.90%	4.54%	4.76%	11.78%
Industry 6	43.23	12.60%	18.90%	4.54%	4.76%	15.13%
Industry 7	43.23	12.60%	18.90%	4.54%	4.40%	5.08%
Industry 8	40.53	11.91%	17.86%	4.29%	6.15%	0.00%
Industry 9	40.53	11.91%	17.86%	3.10%	6.15%	0.00%

3.2 The User Page

To make sure the pricing tool is user friendly, all the previously described sheets in the workbook are hidden and locked with an access key. This further ensures that only the Management has access to amend the budgeted figures, and that the formulas are not compromised. The only visible part of the tool is the user page presented in the figure 9, which is the actual Service Pricing Tool.

Instructions:	
1. Choose an option form the drop down menu in cells coloured in light blue	
2. Fill in assignment specific information to cells colouren in light red	
3. Industry and region specific factors & price appears automatically in geen area	
Region:	Province 1
Idustry:	Industry 1
Quote Variable 1:	1
Quote variable 2:	7
Cost Factor 6 considered in price:	yes
Numb of Units:	5
Adimin hours:	5
Operation hours:	40
Cost of Unit:	10.00 €
Other Variable Costs:	
	%
Variable cost 1	18.50%
Variable cost 2	4.20%
Variable cost 3	2.87%
Variable cost 4	7.70%
Subtotal 1	133%
Fixed Costs:	
Fixed cost 1	0.47%
Fixed cost 2	0.06%
Fixed cost 3	2.93%
Fixed cost 4	18.67%
Fixed cost 5	1.08%
Subtotal 2	164%
Allocated Fixed Costs:	
Allocated fixed cost 1	11.57%
Allocated fixed cost 2	5.22%
Allocated fixed cost 3	11.49%
Allocated fixed cost 4	0.00%
Subtotal 3 (break even price)	192%
Target margin	7.68%
	200%
Price	20.02 €
Gross Profit	17.96%

Figure 9 The Service Pricing Tool

As seen from the figure 9, the top part of the user page contains simple instructions for the user. The cells highlighted with light blue colour all are formulated with dropdown menus that each indicate different terms a quote for the service has. Choosing the right region and industry (figure 10), then determining the variables 1 and 2, and finally whether cost factor 6 from table 3 is included in the price, the tool provides the correct variable costs to the first green section, and region-specific target margin for the second to last area in green.

Region:	Province 1
Industry:	Industry 1
Quote Variable 1:	Industry 1
Quote Variable 2:	Industry 2
	Industry 3
	Industry 4
	Industry 5
	Industry 6
	Industry 7
	Industry 8
Cost Factor 6 considered in price:	

Figure 10 Using the dropdown menus

After choosing the required options from the menus, the user must fill in the cells accented with light red colour. These cells are formed free since the variables are always specific to the order in question. Together with the previous options they calculate the correct allocated fixed costs to the service in the third green part of the page. Together all these variables form the price of a unit with the gross profit margin in the lowest section of the table (figure 11).

Subtotal 3 (break even price)	192%
Target margin	7.68%
	200%
Price	20.02 €
Gross Profit	17.96%

Figure 11 The Price field of the tool

As the tool provides both the break-even and the target prices for the service it makes it easier for the salespersons to see how much leeway they have in price negotiations.

4 Conclusion

After refining the tool, and making sure it is ready to be used, it was presented to the case company. They had initially showed interest towards the theoretical research, as well as the tool itself, as it could reveal some crucial factors in their practices they had not considered in the past. This means the presentation not only included the tool but also presented the key theoretical considerations influencing the functions of the tool.

The last project task aimed to reflect how well the thesis met the requirements set to it. This included assessing how well the various tasks were managed, how the project was concluded, if the tool created in the process indeed fulfils its purpose, and if the case company feels the tool was successful. Therefore, this chapter concludes the results of the thesis, presenting the benefits gained from developing the product giving some recommendations for future usage of the tool, as well. It assesses the thesis project and the case company's feedback on it, closing with reflecting on the author's professional learning.

4.1 Results and Recommendations

The tool was able to create a structured cost allocation structure and job-costing system for the company to base their pricing on. This helps the sales representatives in their price negotiations, as they now have a clear understanding on what affects the price structure. With region and industry specific variables, the tool provides the company an advantage in price negotiations since they can now offer their customers competitive and consistent *regional* pricing. This is important, especially when reaching out to bigger Nordic players.

The tool is kept as simple as possible and the industry specific variables are directly determined by the business segment. This means the company must follow closely the changes in their customers' industries to be able to update the tool accordingly. For future use, the same variables should be altered in accordance to changes in legislation and business practises, as well.

In addition, the budgeted figures and cost allocation of the support departments should be updated annually to match the budget for the tool to provide current results. The amending of the numbers affects to both change in price and reflect clearly on the company's cost design. From adapting the figures annually, they can conclude if there is something to change in their cost management, as well as pricing.

The company could also adapt the tool to the use of the entire corporation with ease. If they wish to do so, they should study country specific factors on certain business segments and alter the cost variables and cost structure to match the operating country in question. Furthermore, by modifying the cost allocation structure to match how the parent company costs are assigned to the operating countries, they can easily use the tool to calculate country specific pricing for Nordic-wide bids to clients operating across the borders.

4.2 Company Feedback

When presenting the tool to the company, they were surprised by the complexity of it, as they were not expecting for it to have so many variables automatized in the functionalities. They were very happy how the actual user page – the tool – was kept very straightforward and user friendly, and how all the other pages containing detailed province and department information was hidden and locked with a password. This functionality ensures that the tool can be distributed to all the company sales personnel, and that they would not be able to review any information that does not affect them.

As the management has faced some issues when considering target profit margins and budgeting for the upcoming financial period, they were curious how the tool does not only focus on setting a specific price for their service but was also able draw attention to the cost structure of the company bringing them to consider the importance of cost design and management. They were pleased that the tool showcases in a simple manner how reducing or managing costs can have a direct effect on the price. The tool also presents the need for more sophisticated sales mix as the service, for which pricing the tool was developed for, is a small margin product that requires higher sales levels to stay profitable. The author was not only able to create simple tool for pricing but generated a structured and logical form to allocate all their operational costs, as well.

As the actual principle in the calculations do not vary, and the tool already considers multiple industries and the fluctuation of cost variables caused by them, the company noted that factors can be easily modified or added to meet the requirements of their customers' specific industries. And even though the tool was developed only to the Finnish offices' use, they saw it very plausible that the tool would be adapted to Nordic-wide use with some alterations to the cost structure and industry specific factors.

4.3 Professional Learning

The process of writing the thesis has been an educative and challenging experience. It has taught me plenty of independent project work. As typically in working life it is common that large projects similar to the thesis are conducted in teams, the task forced me to learn to take a great deal of responsibility of the progress. Time-related matters became some of an issue, as was predicted, but with the guidance of the advisor I was able to manage them, and indeed finalise the project on time. Working closely together with the commissioning party, organising my own work, and managing the scheduling of the project provided me experience in project management, not mention other great competences for the future.

Building the tool had me combining various competences and skills gained while studying for the degree. Moreover, it helped to develop them even further, enabling professional growth. The project benefitted me by refining my proficiency from Excel skills to managerial accounting by incorporating knowledge gained throughout my studies.

Searching the applicable theory turned out to be the most laborious and time-consuming task of the project. As I had specialised in finance and accounting, it was very interesting to research pricing related theory from other fields of specialisation and beyond my own competences. This taught me an important lesson of stepping outside of one's comfort zone. This is what everyone working in business should remember – all aspects of business are linked together, and for everything to work seamlessly, we should have an understanding how it is all related.

At the beginning of the thesis project I had some uncertainties in my professional capabilities in terms of possessing the needed skills to conduct the task at hand. As finishing the thesis would mean graduation was around the corner, it also created unnecessary pressure for me. The thought of graduating can be intimidating, and it alone can have very stressful impacts on the implementation of the project. However, working independently and under some pressure has taught me much about myself and how I work, and has helped me build professional determination for my future career.

References

- Armstrong, G. & Kotler, P. 2015. Marketing: An introduction. 12th ed. Pearson Education Ltd. Harlow.
- Bhimani, A., Horngren, C., Datar, S. & Rajan, M. 2012. Management and Cost Accounting. 5th ed. Pearson Education Ltd. Harlow.
- Braun, K. & Tietz, W. 2015. Managerial Accounting. 4th ed. Pearson Education Ltd. Harlow.
- Datar, S. & Rajan, M. 2018. Horngren's Cost Accounting: A Managerial Emphasis. 16th ed. Pearson Education Ltd. Harlow.
- Doolan, K. 2015. Mastering Services Pricing. Pearson Education Ltd. Harlow.
- Horngren, C., Sundem, G., Burgtahler, D. & Sachtzberg, J. 2014. Introduction to Management Accounting. 16th ed. Pearson Education Ltd. Harlow.
- Liozu, S. 2015. Pricing Journey: The Organizational Transformation toward Pricing Excellence. Stanford University Press. Stanford.
- Morris, M., Pitt, L. & Honeycutt, E. 2001. Business-to-Business Marketing: A Strategic Approach. 3rd ed. Sage Publications Ltd. London.
- TradingEconomics.com 2017. Norway Unemployment rate. URL: <http://www.tradingeconomics.com/norway/unemployment-rate>. Accessed 21 March 2017.